

Module 4 - Lesson 2:

Represent thousandths as a place value unit.

CCSS Standard – 5.NBT.A.1 / 5.NBT.A.3.a

FLUENCY (10-min)

Counting on the Number Line by Hundredths

Use the number line to count by **hundredths** to 10 hundredths and then back down to 0 hundredths. The first number you say is 0 hundredths. Ready?



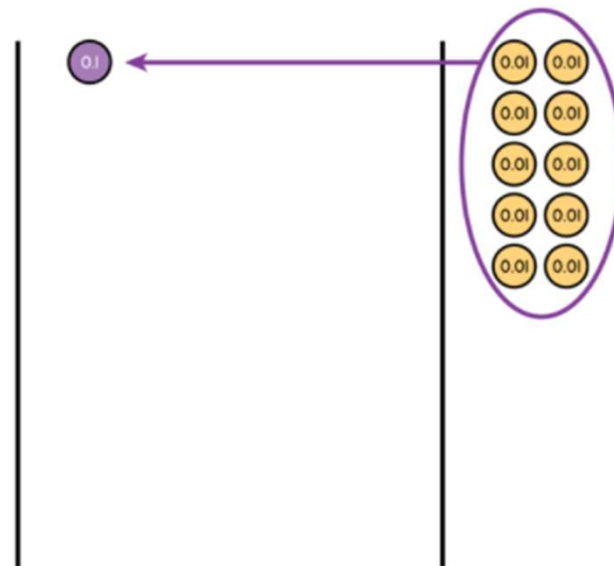
FLUENCY (10-min)

Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

10 hundredths = 1 tenth

What value is represented on the chart? (Say the answer in unit form)



FLUENCY (10-min)

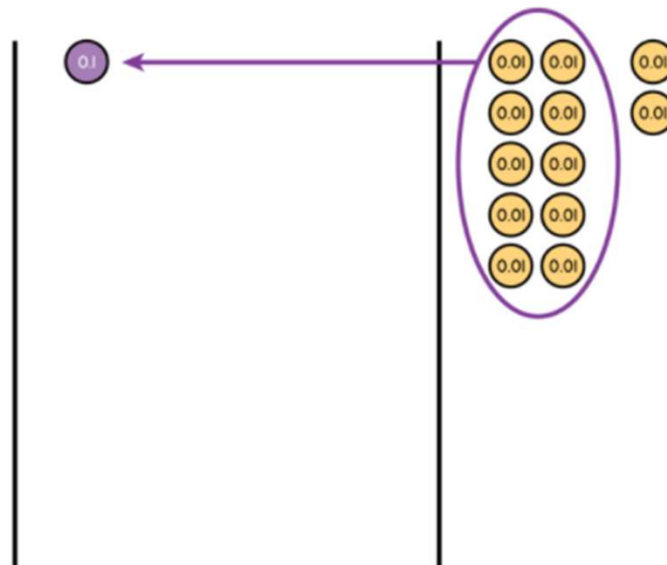
Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

12 hundredths = 1 tenth 2 hundredths

What value is represented on the chart? (Say the answer in unit form)



FLUENCY (10-min)

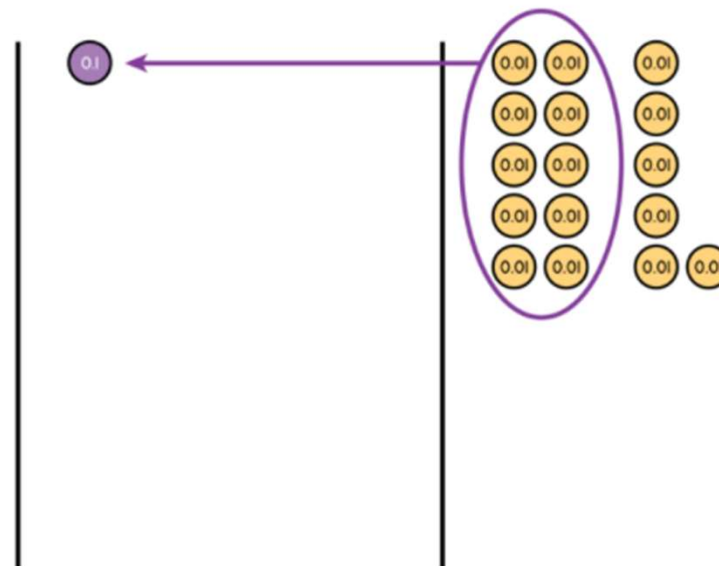
Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

16 hundredths = 1 tenth 6 hundredths

What value is represented on the chart? (Say the answer in unit form)



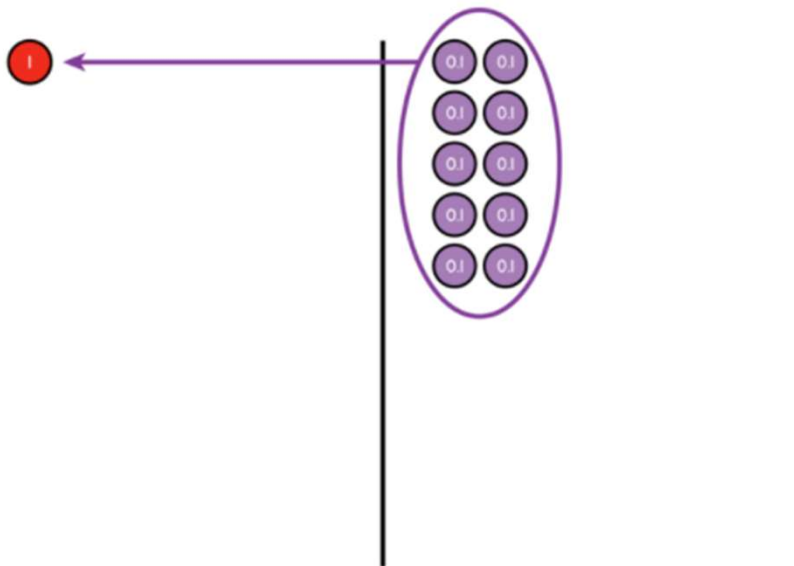
FLUENCY (10-min)

Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

10 tenths = 1 one

What value is represented on the chart? (Say the answer in unit form)



FLUENCY (10-min)

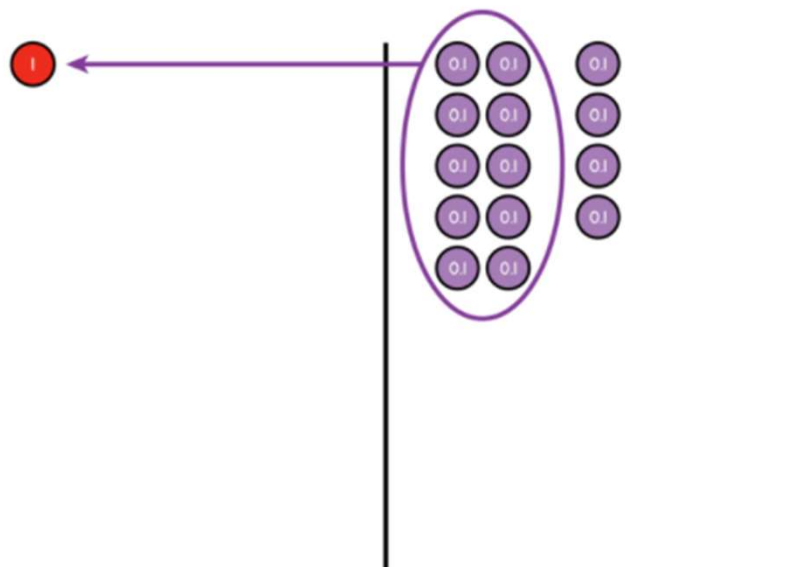
Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

14 tenths = 1 one 4 tenths

What value is represented on the chart? (Say the answer in unit form)



FLUENCY (10-min)

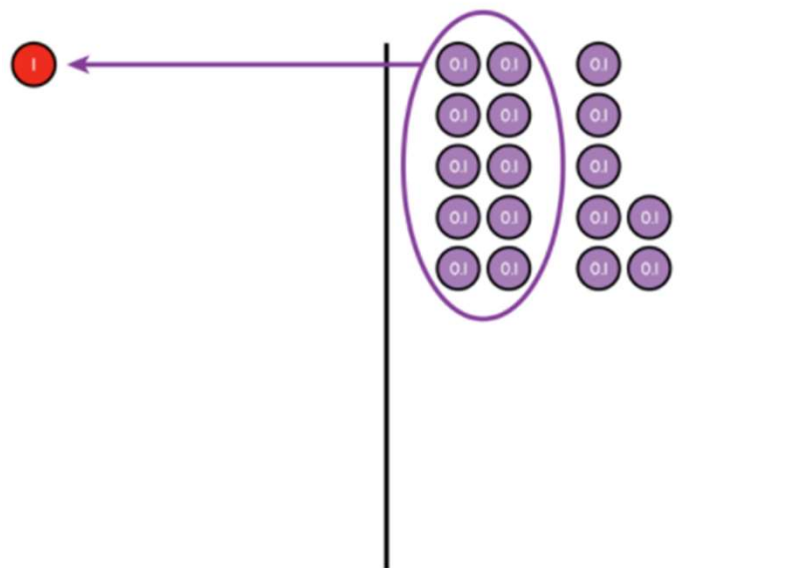
Choral Response: Rename Place Value Units

Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

17 tenths = 1 one 7 tenths

What value is represented on the chart? (Say the answer in unit form)



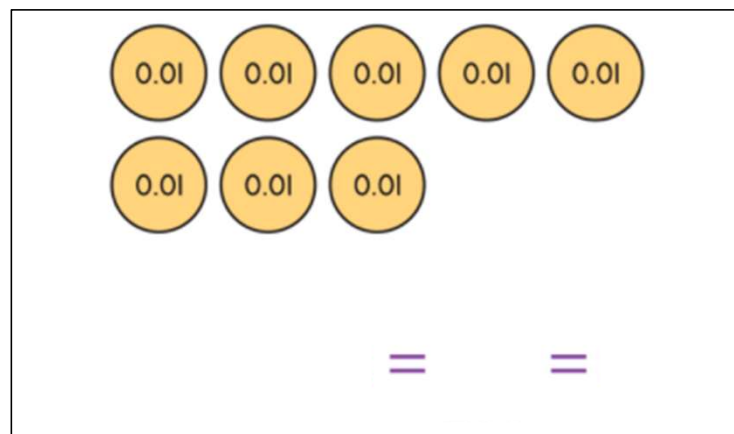
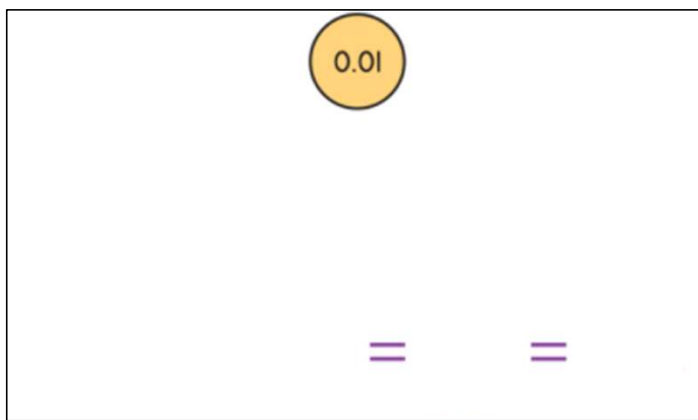
FLUENCY (10-min)

Whiteboard Exchange: Hundredths Written Three Ways



How do you represent the number shown in unit form?

Raise your hand when you know.



FLUENCY (10-min)

Whiteboard Exchange: Hundredths Written Three Ways



How do you represent the number shown in unit form?

Raise your hand when you know.



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FLUENCY (10-min)

Whiteboard Exchange: Hundredths Written Three Ways



How do you represent the number shown in unit form?

Raise your hand when you know.

1

0.1

0.1

0.01

0.01

0.01

0.01

=

=

1

1

0.1

0.1

0.1

0.1

0.1

0.01

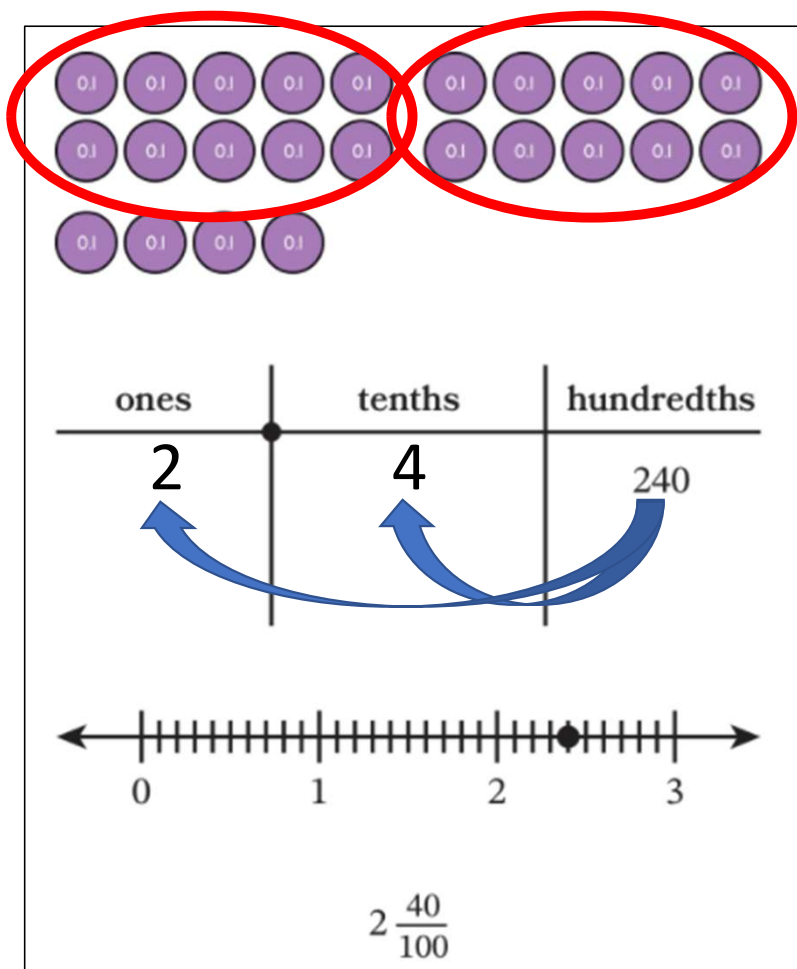
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LAUNCH (5-min)

Students compare various representation of tenths and hundredths

Take one minute to observe and determine how the representations are alike and different.



All 3 representations have the same value. 2.40

Each of these **purple disks** are worth **0.1** or **one tenth**. Think of a dime in money. 24 dimes = \$2.40 right?

We circled 20 tenths plus four more tenths below them – for a total of **24 tenths**.

On the **place value chart**, 24 tenths is the same as 2 ones and 4 tenths. We can also name as 240 hundredths.

2 ones – two \$1 bills

4 tenths – four dimes

or

240 hundredths – 240 pennies.

The number line shows a dot at 2 and 4 tenths; or $2 \frac{4}{10}$ or $2 \frac{40}{100}$.

We can represent decimal numbers in many ways. Sometimes we can rename units. Today, we will represent thousandths as a place value unit in various ways.

LEARN (35-min)

Name Thousandths: Unit, Fraction, Decimal Forms

This model represents 1.

How much does 1 column of the area model represent?

1 column represents **1 tenth**.

We can write it as 1 tenth, or 0.1, or $\frac{1}{10}$.

Ten tenths make up one or one whole.

How much does 1 square of the area model represent?

1 square represents **1 hundredth**.

We can write it as 1 hundredth, or 0.01, or $\frac{1}{100}$.

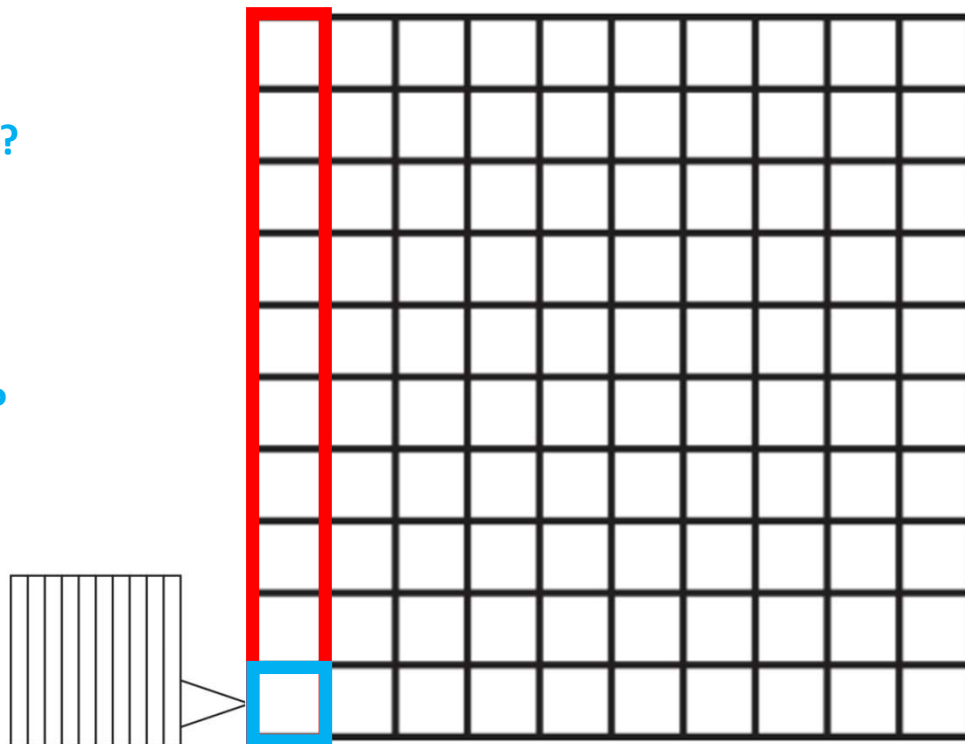
10 squares or 10 hundredths make up 1 tenth.

How can we use the area model to show thousandths?

We need to decompose one square into ten equal parts.

That is, we need to take 1 hundredth and show it in 10 equal parts.

Think about what the area model would look like if we decomposed every hundredth (every square) into 10 equal parts.



LEARN (35-min)

Name Thousandths: Unit, Fraction, Decimal Forms

It would look like this.

Now turn to page 13 in your LEARN book.

Using the zoomed-out square, how would we shade in the area model to represent 8 thousandths?

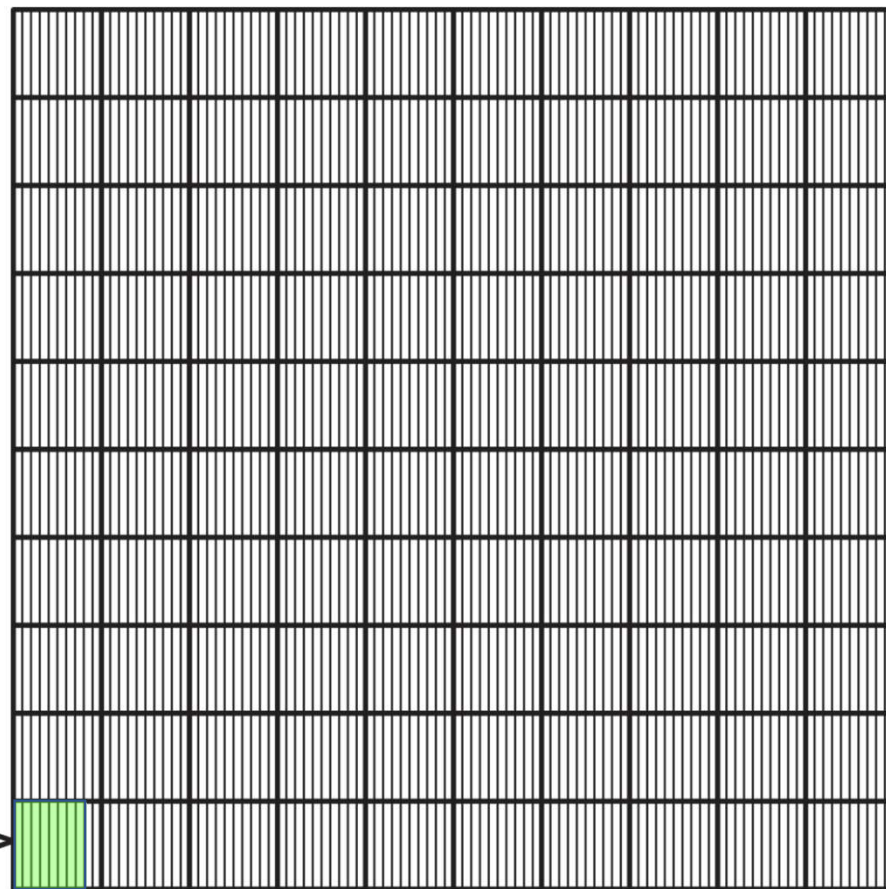
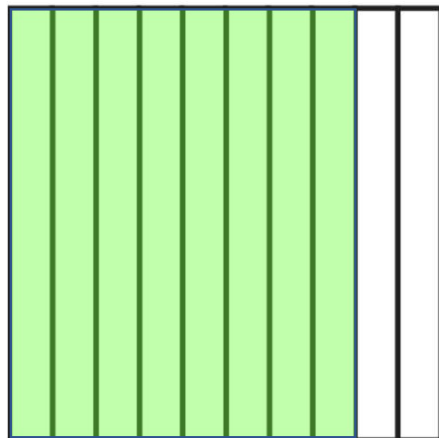
Is 8 thousandths enough to fill one hundredth? **No.**

The green shaded area shows:

8 thousandths

0.008

8/1000



LEARN (35-min)

Name Thousandths: Unit, Fraction, Decimal Forms

LEARN book page 14.

What decimal is represented by the area model?

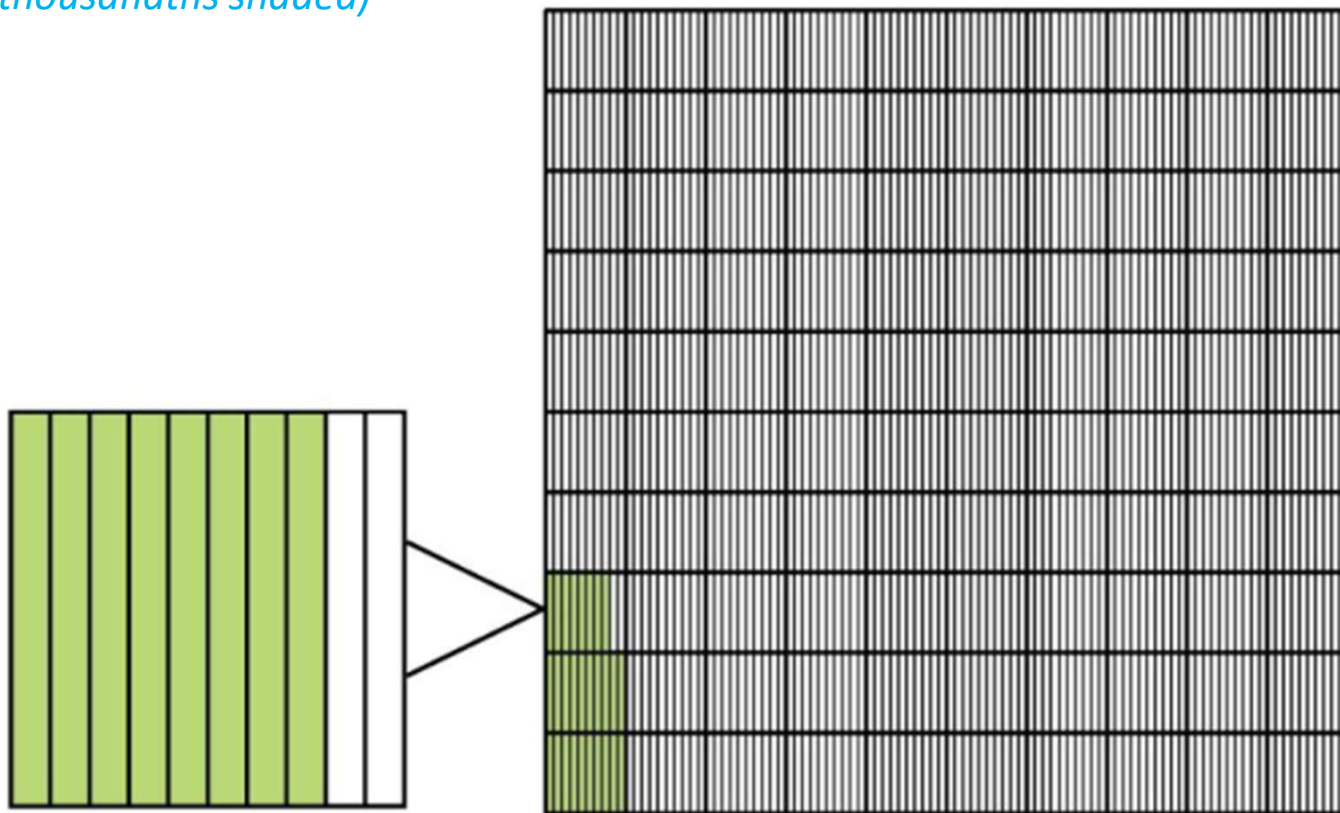
(Notice that there are 2 groups of 10 thousandths shaded)

The green shaded area shows:

28 thousandths

0.028

28/1000



LEARN (35-min)

Name Thousandths: Unit, Fraction, Decimal Forms

LEARN book page 14.

What decimal is represented by the area model?

(Notice that there are 4 columns, or 4 tenths shaded)

4 columns =

4 tenths - or

40 hundredths – or

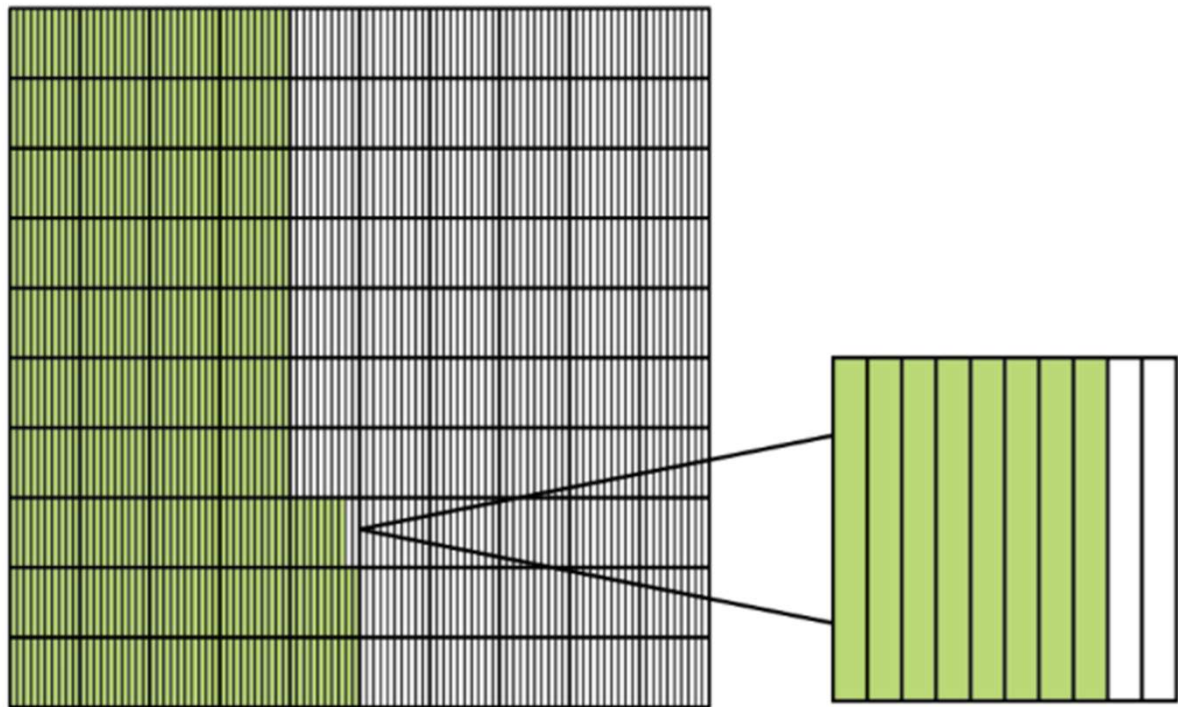
400 thousandths

The green shaded area shows:

428 thousandths

0.428

428/1000

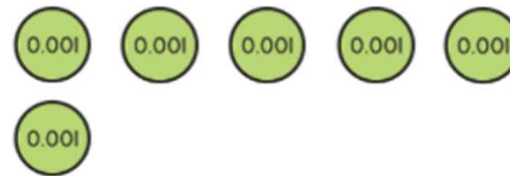


LEARN (35-min)

Compose and Decompose Decimal Numbers Through Thousandths



Look at the place value disks shown, write the value in unit form, fraction form, and decimal form.



Unit form: 6 thousandths

Fraction form: $\frac{6}{1,000}$

Decimal form 0.006

LEARN (35-min)

Compose and Decompose Decimal Numbers Through Thousandths

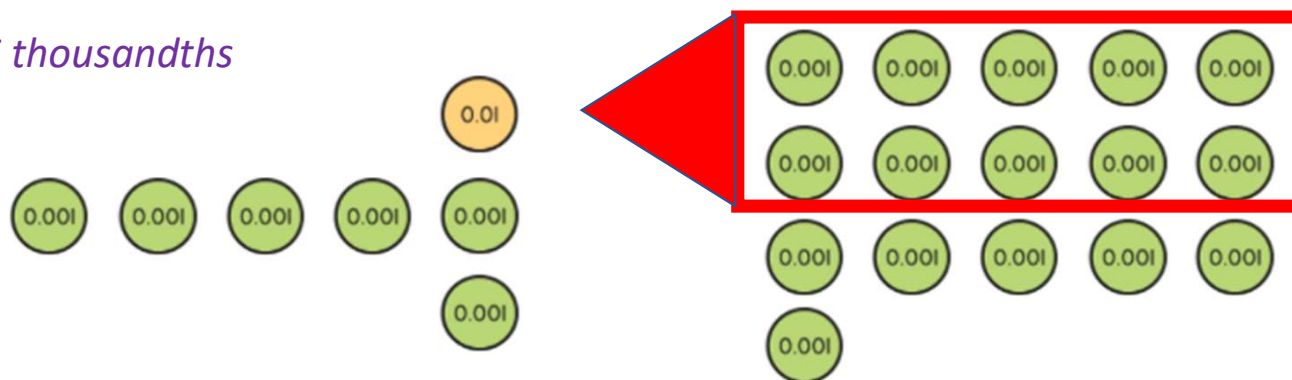


Look at the place value disks shown, write the value in unit form, fraction form, and decimal form.

1 hundredth 6 thousandths

16/1,000

0.016



How might we show the same amount by using fewer disks?

Unit form: 16 thousandths

Fraction form: 16/1,000

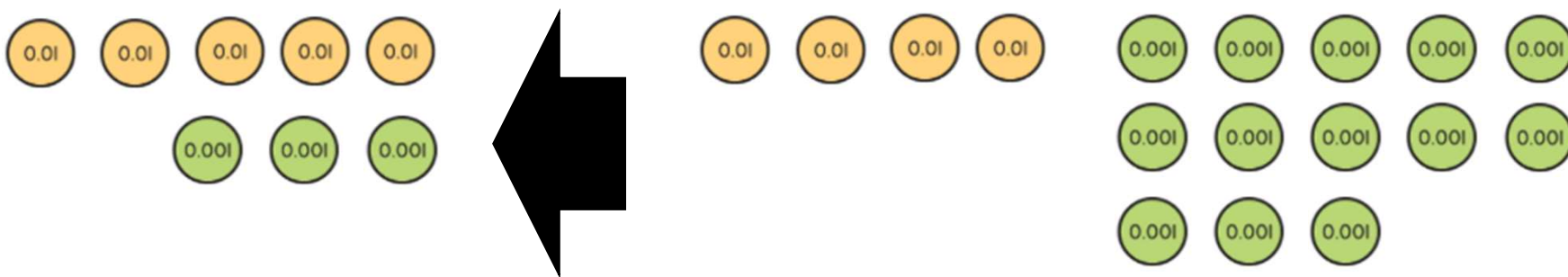
Decimal form 0.016

LEARN (35-min)

Compose and Decompose Decimal Numbers Through Thousandths



Look at the place value disks shown, write the value in unit form and decimal form.



Unit form:

5 hundredths 3 thousandths

Decimal form

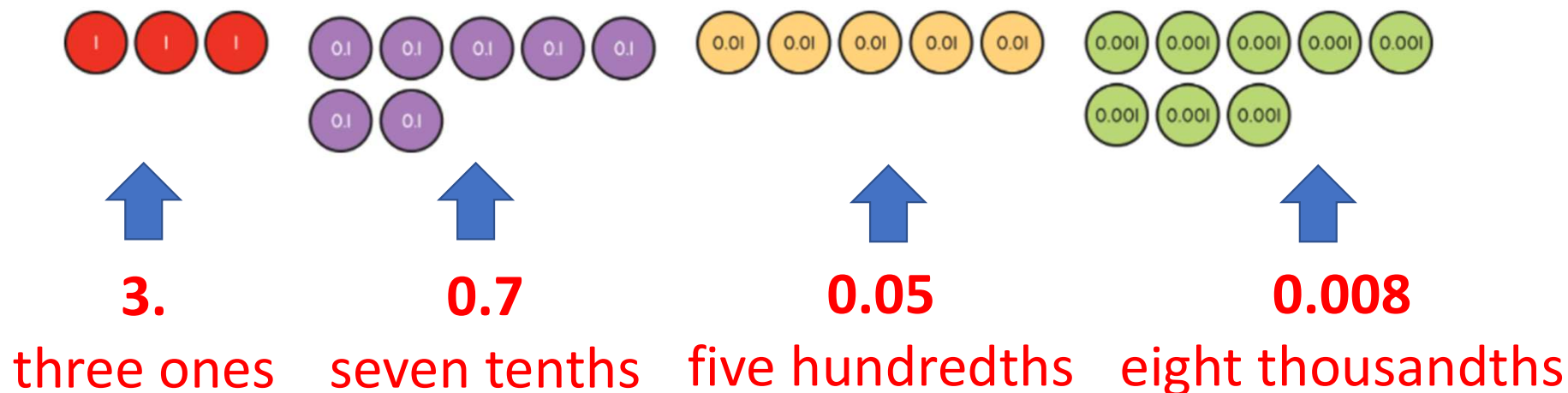
0.053

LEARN (35-min)

Compose and Decompose Decimal Numbers Through Thousandths



Look at the place value disks shown, write the value in unit form, fraction form, and decimal form.



Unit form:

Three and seven hundred fifty-eight thousandths

Fraction form:

$3 \frac{758}{1,000}$

Decimal form

3.758

LAND (10-min)

Exit Ticket




Exit Ticket – PAGE 21

Small Group Time:

Problem Set Pages 15 -18

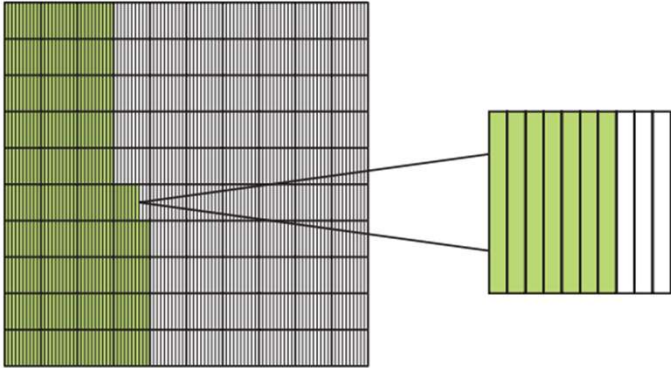
Homework:

Page 15 APPLY BOOK

**2**

Name _____ Date _____

1. Write the number shown in the area model in decimal form.



2. Write each number in decimal form.

a. 29 thousandths

b. 564 thousandths